

Application No. 10/565,291
Amdt. Dated: January 15, 2008
Reply to Office Action of: October 23, 2007

Amendments to the Drawings

The attached sheets of drawings include changes to Figs. 5, 7 and 9. These sheets, which respectively include Figs. 5, 7 and 9, replace the original sheets including Figs. 5, 7 and 9. In Fig 5, the reference numeral 82 has been corrected, in Fig. 7, the reference numeral 104 has been added, and in Fig. 9 the reference numeral 106 has been change to 160.

Attachment: Replacement Sheets
Annotated Sheets Showing Changes

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Remarks/Arguments

Applicant thanks the Examiner for Office Action mailed October 23, 2007. The status of the application is as follows:

- Claim 1-22 are pending.
- Claims 7, 8, 12, 14, 15, 16, 18, 19, 20, 21, and 22 have been amended.
- Claim 17 has been cancelled.
- Claim 2-5 and 17-19 have been objected to for depending on rejected base claims.
- The drawings are objected to for informalities.
- The specification is objected to for informalities.
- Claims 7, 8, 12, 16, and 17 are objected to for informalities.
- Claims 21 and 22 are rejected under 35 U.S.C. §112, second paragraph.
- Claims 1, 6, 12, 15 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Adachi et al. (US 6,304,626 B1).
- Claims 1, 6-8, 10-15 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Hoffman (US 6,934,354 B2).
- Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Adachi et al. in view of Tang (US 5,949,850).
- Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hoffman (US 6,934,354) in view of Tang.
- Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Adachi et al. in view of Eidam et al. (US 6,951,628 B1).
- Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hoffman in view of Eidam et al.

The objections and rejections are discussed below.

The Objection to Claims 2-5 and 17-19

The Examiner is thanked for indicating that claims 2-5 and 17-19 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claim. As discussed *infra*, claim 17, which depends from

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independent claim 15, has been cancelled herein and its limitations have been incorporated into independent claim 15. Applicant believes that the comments and amendments herein place claims 2-5 and 18-19 in condition for allowance. However, applicant reserves the right to amend claims 2-5 and 18-19, as noted by the Examiner, at a later date.

The Objection to the Drawings

The drawings stand objected to as failing to comply with 37 CFR §1.84(p)(4) because reference character 12 has been used to designate both the stationary gantry and the CT scanner in the specification at page 5, lines 13 and 29, and page 6, line 19. This objection should be withdrawn because the specification has been amended herein to cure the noted informality. In particular, reference numeral 10 corresponds to the CT scanner and reference numeral 12 corresponds to the stationary gantry. The noted sections of the specification have been amended accordingly.

Fig. 3 is objected to because reference number 84 is not directed at an end cap. Applicant traverses this objection as reference number 84 is directed at the end cap. As such, this objection is moot.

Fig. 5 is objected to because reference number 82 is split in the middle. This objection should be withdrawn because the reference numeral has been amended to remove the split.

The drawings stand objected to as failing to comply with 37 CFR §1.84(p)(5) because they do not include reference numerals 104 and 132, which are mentioned in the specification. This objection should be withdrawn as reference numeral 104 has been added to Fig. 7, and reference numeral 132 has been removed from the specification.

Fig. 9 is objected to because reference number 106 is not directed toward the electronics. This objection should be withdrawn as reference numeral 106 in Fig. 9 has been changed to reference numeral 160 since the reference numeral is referencing the alignment pins 160.

The drawings stand objected to as failing to comply with 37 CFR §1.83(a) because the drawings must show every feature of the invention specified in the claims

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and the subject matter of claim 8 is not shown in the drawings. Applicant traverses this objection as the structural elements in the subject apparatus claim, namely the radiation detector 30, the absorbing mask 120, the second strips 130, and the anti-scatter vanes 80 are respectively shown in Figs. 1, 7, 10A, and 8.

The Objection to the Specification

The specification stands objected to for a typographical error. In particular, the Office notes that reference numeral 12 in the Abstract should be 10. The Abstract has been amended herein to remove all reference numerals. As such, this objection is moot.

The Objection Claims 7, 8, 12, 16, and 17

The claims stand objected to for informalities. In particular, the Office notes that claims 7, 8, and 12 lack antecedent basis with respect to the anti-scatter vanes and the scintillation elements, and claims 16 and 17 depend from claim 14, when they should depend from claim 15. This objection should be withdrawn as the subject claims have been amended to cure the noted informalities.

The Rejection of Claims 21 and 22 under 35 U.S.C. §112, second paragraph

The claims are rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 20 and 21 have been amended herein to cure this rejection and to include aspects from claims deemed allowable by the Office. As such, this rejection should be withdrawn, and claims 20 and 21 should be allowed.

The Rejection of Claims 1, 6, 12, 15 and 20 Under 35 U.S.C. 102(b)

Claims 1, 6, 12, 15 and 20 stand rejected under 35 U.S.C. 102(b) as being anticipated by Adachi et al. This rejection should be withdrawn because the Office has not established a *prima facie* case of anticipation.

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The goal of examination is to clearly articulate any rejection early in the prosecution process so that the applicant has the opportunity to provide evidence of patentability and otherwise reply completely at the earliest opportunity. The pertinence of each reference, if not apparent, must be clearly explained and each rejected claim specified. (MPEP §706 and 37 C.F.R. §1.104(c)(2)).

Moreover, Adachi et al. does not teach each and every element as set forth in the subject claims and, therefore, does not anticipate claims 1, 6, 12, 15 and 20.

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631 (Fed. Cir. 1987). MPEP §2131.

First, the subject Office Action does not establish a *prima facie* case of anticipation because it does not identify which features of the prior art correspond to the claimed elements and limitations. To meet the burden of establishing a *prima facie* case of anticipation, the Office must explain how the rejected claims are anticipated by pointing out where the specific limitations of the claims are found in the prior art. *Ex Parte Naoya Isoda*, Appeal No. 2005-2289, Application 10/064,508 (Bd. Pat. App. & Inter.2005). The Office does not do this.

More particularly, independent claim 1 requires, *inter alia*, a *first aligning means* for aligning an anti-scatter module with a spatial focus and a *second aligning means* for aligning the anti-scatter module with a detector subassembly module. In the subject Office Action, the Office does not identify which features in Adachi et al. correspond to the first and the second aligning means recited in claim 1. Applicant requests a non-final Office Action with specific identification of the features or elements in the cited reference that are deemed to correspond to the claimed elements and limitations, and, if possible, the location in the cited reference where the relevant feature or element is discussed.

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Next, Adachi et al. does not teach or suggest a two-dimensional detector that includes first and second aligning means as recited in the subject claim. More particularly, Adachi et al. is directed towards a CT scanner x-ray detector array 5 having a plurality of detecting elements 6. A mask 14 is placed on the detector array 5, between the detector array 5 and a collimator 11. The mask is formed with a pattern of shield portions in line form, each extending substantially parallel to the channel direction to shield edges of all the x-ray detecting elements 6 arranged in the x direction from incident x-rays. Thereby, the instability of sensitivity of x-ray detection of the edges of the x-ray detecting elements 6 and arrangement errors of the x-ray detecting elements 6 in the slice direction are canceled out. (See Abstract and Figs. 4 and 5). However, Adachi et al. is silent regarding a detector array having first and second aligning means respectively for aligning an anti-scatter module with a spatial focus and aligning the anti-scatter module with a detector subassembly module, as recited in claim 1.

Accordingly, this rejection of claim 1 should be withdrawn.

Independent **claim 15** has been amended herein with subject matter deemed allowable by the Office. In particular, the Office noted that claim 17, which depends from claim 15, would be allowable if rewritten in independent form to include any intervening claims. Claim 15 has been amended herein to include aspects of claim 17. As such, claim 15 should be allowed.

Claims 6, 12, and 20 depend from claim 1 or 15 and are allowable at least by virtue of their dependencies.

The Rejection of Claims 1, 6-8, 10-15 and 20 Under 35 U.S.C. 102(b)

Claims 1, 6-8, 10-15 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Hoffman. This rejection should be withdrawn because the Office has not established a *prima facie* case of anticipation and Hoffman does not teach each and every element as set forth in the subject claims and, therefore, does not anticipate claims 1, 6-8, 10-15 and 20.

With respect to **claim 1**, similar to the rejection based on Adachi et al., the subject Office Action does not establish a *prima facie* case of anticipation as it does not identify

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which features of the prior art correspond to the claimed elements and limitations. Again, independent claim 1 requires, *inter alia*, a *first aligning means* for aligning an anti-scatter module with a spatial focus and a *second aligning means* for aligning the anti-scatter module with a detector subassembly module. These features are not identified in Hoffman by the Office and are absent from Hoffman. Applicant requests a non-final Office Action with specific identification of the features or elements in the cited reference that are deemed to correspond to the claimed elements and limitations, and, if possible, the location in the cited reference where the relevant feature or element is discussed.

Moreover, Hoffman does not teach or suggest a two-dimensional detector that includes first and second aligning means as recited in the subject claim. More particularly, Hoffman is directed towards a collimator assembly defined by a series of multi-piece collimator elements or plates that extend along at least one dimension of a scintillator pack. Each collimator element has a collimating component and a shielding component that are structurally independent from one another. The collimating components may be connected to the shielding components or separated by a small air gap. The shielding components are wider than the collimating components but the collimating components have a greater height. With this construction, the collimator assembly optimizes collimation and shielding with lower material requirements and reduced overall size. (See Abstract). However, Hoffman is silent regarding a detector array having first and second aligning means respectively for aligning an anti-scatter module with a spatial focus and aligning the anti-scatter module with a detector subassembly module, as recited in claim 1.

With respect to independent **claim 15**, as noted *supra* claim 15 has been amended to incorporate aspects of claim 17, and the Office states that claim 17, which depends from claim 15, would be allowable if rewritten in independent form and to include any intervening claims. As such, claim 15 should be allowed.

Claim 7 depends on claim 1 via claims 2 and 4. The Office has conceded that Hoffman does not anticipate claims 2 and 4. As such, this rejection of claim 7 is improper, and, therefore, the rejection of claim 7 should be withdrawn.

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With respect to **claim 8**, which depends on claim 1, the Office asserts that Hoffman teaches a radiation absorbing mask that includes second strips perpendicular to anti-scatter vanes in which the second strips are of substantially a same dimension as a gap between the detector elements. To support this assertion, the Office states that Hoffman teaches that a width W_s (the width of the shield) is substantially a same dimension as a width W_r (the width of the reflector). The Office is mistaken. In contrast, Hoffman discloses that a width W_c (the width of the collimator) is substantially similar to W_r , and that W_s is greater than W_r . (See column 2, lines 43-49, and column 6, lines 24-25). As such, Hoffman teaches that the width W_s is greater than (and not substantially similar to) both the widths W_r and W_c which are substantially equal. Thus, the Offices assertion that W_s is substantially a same dimension as W_r is incorrect. Accordingly, this rejection should be withdrawn.

With regard to **claim 11**, the Office asserts that this claim is limited to the structure implied by the method. However, Hoffman does not disclose an aperture precisely defined by photochemical etching. Thus, Hoffman does not teach or suggest claim 11.

Claim 14 has been amended herein based on the allowable subject matter. It is believed that the claim 14 is now patentable over the art of record. As such, applicant respectfully requests withdrawal of the rejection to and allowance of claim 14.

Claims 6, 12, 13, and 20 depend from claim 1 or 15 and are allowable at least by virtue of their dependencies.

Other Claims

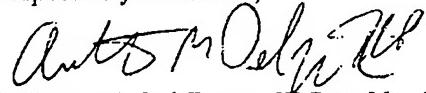
Claims not mentioned above directly or indirectly depend from independent claims 1 and 15, and are allowable at least by virtue of their dependencies.

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Conclusion

In view of the foregoing, it is submitted that the pending claims distinguish patentably and non-obviously over the prior art of record. An early indication of allowability is earnestly solicited.

Respectfully submitted,



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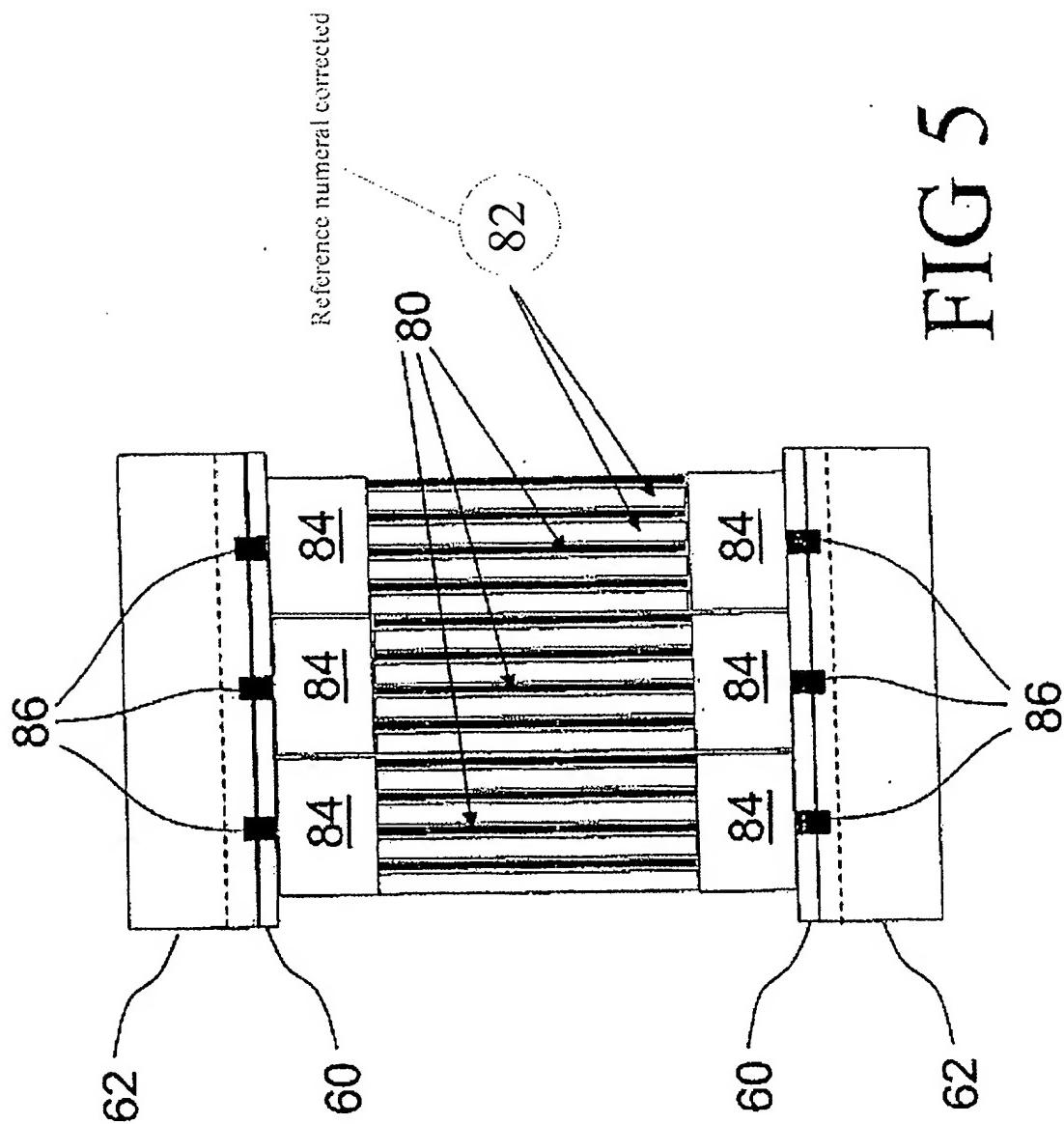
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FIG 5



6/12

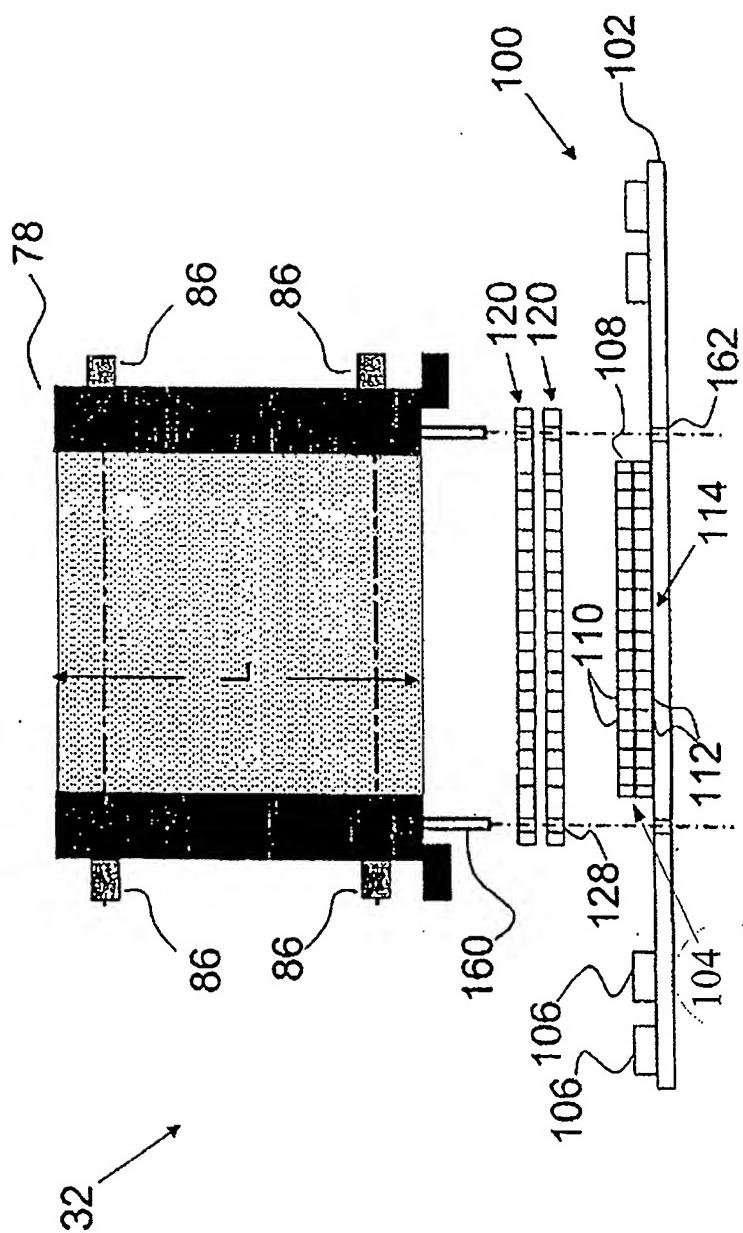


FIG 7

Reference numeral 104
has been added